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THE PHYTOLOGIST.

A BOTANICAL JOURNAL.

Ὡς ἐμεγαλύνθη τὰ ἔργα σου, Κύριε!—πάντα ἐν σοφίᾳ ἐποίησας.

ΨΑΛΜ. ργ'. 24.

Benedicite universa germinantia in terra Domino; laudate et superexaltate EUM in secula.—*Hymn. iii Pueror. v.* 76.

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HIGHLAND BOTANY.

Two Days' Botanizing in the Highlands.

By ALEXANDER MACALISTER, M.D.

About the middle of last July, with some botanical friends, I started for a couple of days' botanizing on the southern and most accessible part of the Highlands. Leaving Glasgow early in the morning, we were deposited by rail at the Bucklyvie station, in Stirlingshire, from whence we intended to walk to Loch Ard, a distance of eight or nine miles. The road from the station passes through a very pleasingly diversified country, at one time bordered by cultivated land and pastures, at another by extended districts of bog, and growing more picturesque as we skirted along the side of the Forth and entered the wilder and more rough part of our route. Few rarities came in our way, the only specimens we transferred to our vasculums being *Polypodium Dryopteris*, which we found in abundance, its delicate triangular fronds rising from the interstices of the stone dykes along with *Asplenium Adiantum-nigrum*, some fine specimens of which we gathered. Further on we found one plant of *Cystopteris fragilis*, and one very well marked, though small, plant of *Lastrea Thelypteris*, of which I took possession. Along with these, but in greater abundance, we found *Lastrea Oreopteris* and *Filix-mas*, a few plants of *Aspidium aculeatum*, *Polypodium vulgare*, and *Athyrium Filix-fœmina*. Along the hedgebanks abundance of *Campanula rotundifolia* grows, accompanied by the commoner species of *Hieracium*, *Lathyrus*, etc.; in one of the bogs near Gartmore I found *Salix cinerea* and abundance of *Narthecium ossifragum*, *Eriophorum vaginatum* and *polystachyum*, and *Carex pilulifera*. Having arrived at Aberfoyle, the romantic spot where the Avon Dhu and Duchray unite to form the Forth, we entered the inn, so well known from its connection with Sir Walter Scott's inimitable romance 'Rob Roy;' here we satisfied the cravings of our appetite with a substantial lunch and shelter from a very heavy shower, which however was soon over, and we proceeded on to Loch Ard, one of the most beautiful spots of Highland scenery. By the Avon Dhu which arises from the lake, we found *Ranunculus Lingua*, *Flammula*, *hederacea*, and *aquatilis*, *Galium saxatile*, *verum*, and *palustre*; in the loch we found, at its lower end,

BRITISH MUSEUM

Potamogeton natans, Eleocharis palustris and *acicularis, Rhyncospora alba, Juncus effusus* and *conglomeratus;* on ascending the loch we arrived at the most magnificent spot of Highland scenery I ever visited; on each side the hills rose thickly covered with trees, the lake lying calm below, and high towering over all appeared Ben Lomond, the monarch of the district. In the woods grow the *Pyrola rotundifolia* and *secunda, Viola canina, Rubus cæsius* and *cordifolius, Rosa tomentosa, canina,* and *arvensis;* in the more open districts we found *Pyrus communis, Hypericum quadrangulum, perforatum, pulchrum,* and *humifusum, Lastrea dilatata, L. recurva, Euphrasia officinalis, Nepeta Cataria, Galeopsis Tetrahit, Ornithopus perpusillus, Sedum anglicum* and *acre, Melampyrum pratense, Agrostis alba, A. canina, Festuca bromoides, F. duriuscula, Nardus stricta, Anthoxanthum odoratum, Melica uniflora* and *nutans.* Having feasted our eyes till it was getting late, we turned from this lovely spot and took the road to Monteith, where we had arranged to stop for the night; near the road on our way we found *Pinus sylvestris* and *Juniperus communis* in abundance, *Corydalis claviculata* among a clump of hawthorn-trees, and on the walls *Gnaphalium dioicum* and *uliginosum, Ægopodium Podagraria, Asplenium Trichomanes,* and *Ulex nanus.* Late in the evening we arrived at Monteith, where we stopped the night, intending in the morning to cross to the island Inchmahome, so celebrated as where the unfortunate Princess Mary spent her girlhood; but on rising in the morning we found dark clouds on the horizon, and the lake—which we left in the night calm and placid—a turbid stormy sea, so much so that we could not get a boatman to take us across, and had to content ourselves with a ramble on the mainland. In the lake we saw *Nymphæa alba, Nuphar lutea* and *pumila, Isoetes lacustris, Poa fluitans, Typha latifolia,* and *Chara vulgaris;* near it, in the ditches by the roadside, we found *Cicuta virosa, Menyanthes trifoliata, Alisma Plantago,* and *Comarum palustre.* We turned from the lake and went to the foot of the neighbouring hills, an offshoot of the Grampian range; we turned up these, and found on them *Asplenium Ruta-muraria* and *Polypodium alpestre, Pinguicula vulgaris, Parnassia palustris, Myrrhis odorata, Juncus squarrosus* and *acutiflorus, Veronica officinalis, V. montana, V. Chamædrys, V. Beccabunga,* and *V. Anagallis, Genista anglica, Sarothamnus scoparius, Lychnis Flos-cuculi, L. vespertina,* and *L. Githago, Spergula nodosa, Ilex Aquifolium, Myosotis arvensis, M.*

palustris, *M. versicolor*, and *Thymus Serpyllum*. From this walk we returned to the inn at Monteith, and after dining there took the road to the Port of Monteith station, where we took the train to Stirling; on our way to the rail we found the *Vaccinium Myrtillus* and *V. Vitis-Idæa*, *Geranium columbinum*, etc. Late at night we arrived in Stirling, very tired, and very well pleased with our excursion and its results.

THE GENUS LUZULA.

Remarks on the Genus Luzula. *By* JOHN SIM.

Several of our larger genera, as *Salix*, *Rubus*, and *Hieracium*, contain an inconvenient number of species, or mere varieties depending on soil and situation, though they are by the compilers of our British floras considered as distinct species; this statement may easily be proved by any one who possesses an herbarium containing these genera, the so-called species insensibly merging into each other in a majority of cases. Mr. Bentham, in his 'British Flora,' has (I consider) wisely abridged the *quasi*-species of these genera.

The genus *Luzula* is at present in a very different condition; instead of having too many species it has in my opinion too few. On referring to the British floras of Hooker, Babington, etc., I find that there is a species (for such I consider it) which is very unsatisfactorily accounted for; Hooker appears to notice the plant in question under *Luzula campestris*, but passes unnoticed its most distinctive character. *Babington* notices it under *L. multiflora*, but only as a variety. In the 'Handbook of the British Plants' it is placed in the species *multiflora* under *α*, a variety with stalked clusters, and there is a second also, a var. *β*, with clusters sessile. Now this is quite correct that two plants exist possessing these two characters, but this is not all: these two forms of *Luzula* I hold to be two distinct and independent species, and not varieties at all; I cannot divine for what reason they were ever considered to be only different forms of one and the same plant, but this I know from observation, that no two species of *Luzula* are more unlike than the assumed varieties *α* and *β*. Let us examine them both.

Var. *α* (see 'Handbook of British Plants,' p. 274) is a much

smaller and slenderer plant than var. β, seldom exceeding one foot in height, has the clusters stalked, and the inflorescence looks like a little umbel; it moreover prefers grassy places in a gravelly soil, var. β growing in a peaty soil.

Var. β is a far more robust plant than α, and has the flowers and seeds in a compact congested capitulum, or head, and is a taller plant than α, often being two feet in length. Both these forms occur on the margin of Methven Bog, α occupying the drier ground, where the soil is gravelly, β the moist, where the soil is peaty. I would suggest the abolition of *L. multiflora* altogether, and make α and β two distinct species, calling var. α *Luzula pedicellata* and var. β *L. congesta* or *aggregata*; the latter specific name I would prefer. This is not a new discovery of mine; I have observed the two plants in question years since, and from close observation am perfectly satisfied in my own mind that they are two different species, and no more related to each other than *L. campestris* and *L. sylvatica*. I should like that botanists will just be at the trouble to examine for themselves, and not take for granted what others bring forward, but ever bear in mind that the greatest and wisest and most observant of men are sometimes in error, and liable to go astray as well as others of less extensive information. I should like extremely well to have the views of some of my botanical brethren upon the *Luzula* in question, in a future number of this Journal.

[Our excellent correspondent may be satisfied that his appeal to the readers of the 'Phytologist' will not be unproductive of results.]

BOTANY OF NORMAN'S LAW.

An Afternoon's Botanizing on Norman's Law, parish of Abdie, Fifeshire, in June, 1862. *By* C. Howie.

We drove along the Newburgh road, from Cupar, the county town, to a smithy, opposite to a branch road winding upwards to Norman's Law, the scene of our journey. The smith welcomed us, as all Scotch smiths do, to the hospitalities of his smithy and his kind attention. The young botanists of the company, accustomed to the smile of their "ain fireside," were not awed by the

stiff, reserved conventionalism which we generally hear complained of, when the elongated physiognomy of auld Scotia's rural population meet with parties of wandering herbalists. It appears incomprehensible to the uninitiated in botanical lore, why persons of sane minds give themselves so much trouble, and incur so much expense, to gather or simply to look at weeds. The gathering of something to eat or infuse, or if their vasculums possessed the charm of emitting sweet music, like the hum of a bagpipe, men in botanical costume might have easier run the blockade of titled lairds, and have escaped threats of incarceration for the crime of indulging in their wandering mission as field botanists, and the field rustic would have expanded at the sound of the pipe or by some such disclosure, through which he could understand the mysterious appearance of the company. Our host however, like ourselves, was regardless of appearances, and readily furnished us with the necessary directions.

We took the road by the farmhouse of Glenduckie. While sheltering from the rain we were satisfied as to the name of the place being suitable to the occasion, and while climbing the crags of Craiglogie we were again reminded of the suitableness of the terminology. On passing the two farms, along by the walls and hedges grow strong plants of *Scrophularia vernalis* and *Sisymbrium Alliaria*. The *Scrophularia* is by no means rare in the county, although we have found it, like a few other plants, associated with the abodes of former generations. Among the college grounds of St. Andrew's it was prevalent previous to modern improvement, and also among old gardens. It occurs frequently by the ruins of Craighall, Ceres and Balcarris Den; in several other places it has been found by other parties.

The *Sisymbrium* is rare on the east of Fife; we have only found it previously by the sides of the hedges at Largo.

Ascending the Law, we found *Saxifraga granulata* in dense flower, interrupted by the rock occasionally cropping out. This plant is not rare all over the county, where it generally is distributed in isolated patches.

Our object was to search among the Cryptogams, had weather permitted; and although we found nothing new to the county, one or two stations are worth recording. *Grimmia leucophæa*, found sparingly, but too late in the season; *Bryum crudum* in fruit. This plant, as at Drumcarro Crag, near to Magus Muir, oc-

cupies a similar position here in the shaded crevices of rocks, associated with the common *Bartramia ithyphylla.*

Bryum alpinum, with its bright-tinted foliage in dense patches covering the margins of rocky surfaces, in partial fruit. *Cynodontium Bruntonii*, in fruit, covers the face of a rock in isolated patches; this Moss is found in various other stations over the county in similar situations.

Ferns, Hepaticæ, and Lichens presented nothing new or rare through the course of our hurried search. The Scotch mist was passing under a rapid high development when we left off our explorations and stood for the summit of the Law. Among the foliage of *Polytrichum formosum*, where the tempest howled as Boreas blew his blast, we obtained a shaded view to the west of the junction of the Earn with the Tay, which rolled down before us; stretching out towards the east until it was lost in the ocean; the flat expanse of the Carse of Gowrie lay before us. Extending to the east were clustered together the town and shipping of Dundee, the mart of trade and population, enclosed with the hills of Sidlaw and the Grampians. Norman's Law is a district highly interesting to the archæologist, upon which I will not enter, simply referring to the term 'Law' given to so many of the lofty eminences of this county, as referring to a spot where lies all that remains to us of Fife's early inhabitants to unravel the past ages of an undescribed history. Norman's Law forms a turret on the range of the Ochils (?) which extends by the north side of the river, and is still interesting to the poet, the painter, and the philosopher, as it was to Fife's early inhabitants when living, and sacred by the ashes of the ancient tomb and the urn, when dead.

CASTANEA VULGARIS.

The Common Chestnut Tree.

In a recent number of the 'Phytologist,' S. B. asks if he should place a specimen of the above in his herbarium of British plants. He is hereby informed that he may safely do so.

Mr. Babington, our greatest living authority on such subjects, enters it in his 'Manual,' with the remark, that it "is a doubtful native;" therefore it should have, as jurists will say, the benefit of

the doubt; and for this reason, and for its many excellent qualities it should not be denied a place among the spontaneous productions of England.

Ray, the greatest of all our botanists previous to the present age, does not hesitate to place it among the natives. It may be said that he places wheat and barley also among English plants. His remark on the locality of the Chestnut is, "in some woods near Sittingbourn, Kent, and Woburn, Beds; but whether spontaneous or anciently sown there I cannot determine." Is there anybody can? The tree has been in this island ever since the Romans had dominion in these isles, probably before. Little weight should be attached to Cæsar's relation, "that all the trees which grow in Gaul are common to Britain, except the Beech and Pine." We know that this is not true—all the trees of Gaul, or France, are not to be found here; and there may have been trees in Britain which the great Roman conqueror did not see. Besides, it is the Beech, and not the Chestnut, which Cæsar tells us was not in Britain; but, as some erroneously fancy that the great Roman wrote 'Beech' where he should have written 'Chestnut,' it has been deemed expedient to make the above remark. Sir James E. Smith, one of the greatest modern botanists, informs us that "it appears to be wild in the south and west of England, and its timber has been employed in some of our oldest buildings." He further tells us "that it rivals if it does not exceed the British Oak in size and duration" (vol. iv. p. 151). Withering states (vol. ii. p. 445, ed. 1796), that "some of the oldest buildings in London are said to be constructed with this wood; at Tartworth, in Gloucestershire, there is a tree fifty-two feet round. It is proved to have stood there ever since the year 1150, and was then so remarkable as to be called 'the great Chestnut of Tartworth.'"

In the 'Gentleman's Magazine' for 1766, p. 321, there is both a figure and a history of this tree by the famous Peter Collinson, who had no doubt of the Chestnut being a native of England; and he assigns as the reason why these trees are rarely found of large size in woods, that the profit from cutting and selling them for hop-poles is very much greater than that derivable from their timber and lop. Another reason may be assigned for the non-exclusion of this fine tree from our herbaria of native plants is, that if we discard this species we must disown the Tilias, our valuable

Maple, several of our Plum-trees, Medlar, Sorb, etc. And, besides these, how can we with any degree of consistency retain our poplars? *Populus alba, P. tremula, P. nigra*, and a multitude of Willows and Osiers, must be discarded. But again, where are we to place our *Elms?* Are we certain of their nativity? Or was there ever a time since this island emerged from the surrounding ocean when the Elm-tree was absent from our farmhouses, our hedges, our meadows, and our fields?

There is no historical record of the importation of any one of the above-mentioned trees. Is *Carpinus Betulus* a native? Is *Betula Alnus* a native? Is the Ash a native? Is *Fagus sylvatica* a native? Cæsar says it is not. What are the native trees of Britain or of the British Isles, the Oak of the south and the Pine of the north, and the Birch, and the Mountain Ash? The Pine is not a true native of the south of Britain, nor, probably, is the Oak of the north. There are several counties where the Mountain Ash is only a planted tree. The following are all in the same predicament, viz. the Willows, the Poplars, the Ash, the Elm, the Beech, the Maple, the Lime, the Hornbeam, and the Chestnut. There is no historic evidence of their ever having been introduced into this country; and the ocular proof we have and the historical accounts of many of them are presumptive evidence of their nativity.

But if any or many botanists choose to be hypercritical on this subject, the history of the trees,—if they will still resist the testimony of past ages and the results of experience and observation,—we cannot help them; nobody can convince them; but it may be said, without offence, that their objections and their arguments have no great weight. Some excellent people have prejudices and untenable conceits about the nativity of many other plants; and it would be only labour lost to refute their pet arguments, and try to upset their visionary speculative theories.

SCOLOPENDRIUM VULGARE, ETC.

By JOHN SIM.

This comparatively rare Fern (rare in Scotland only, I mean) was brought to me on the 2nd of July, from rocks in the Den of Murrayshall, near Perth, by Mr. Soutar, of New Scone village,

who says it grows in that locality in tolerable profusion. This locality is about three miles east of Perth, and upwards of twenty miles from the sea. This fine Fern, I am informed by Mr. Lamb, of Perth (a lover and cultivator of Ferns), was collected this summer by him in the rocky Den of Auchmedden, about three miles west of the village of Aberdour, in Aberdeenshire, close to the sea-side; some of its fronds, he said, were most luxuriant, and exceeded two feet in length; the var. *polyschides* was also found there. From the same locality he gathered specimens of *Asplenium marinum*, a living plant of which from that place he gave to me; I potted it, and it is a thriving plant in my room window. From the Den of Murrayshall, my friend Mr. Soutar also brought examples of *Cystopteris fragilis*, and a form of *Lastrea Filix-mas* having its pinnæ furcate at the extremities. In the same Den, under the trees, he collected a fine example of *Hieracium aurantiacum*. This rare plant is one of the disputed or doubtful natives. I do not mean to enter the field of contest or controversy about it, but I think, from the many unsuspicious-looking localities in which it is and has been so long found in different parts of Great Britain, I cannot see much consistency in excluding it from the list of native plants, and admitting others of far less frequent and recent occurrence. In the days of Don, it was found in "several woods in Banffshire, and at Craigston, near Turriff, Coalston Woods, East Lothian, and woods to the east of Kenmore." (See Hooker's Fl. Scotica, p. 229.)

I may remark that this is pre-eminently the age of Ferns. Ferns engross the attention of both the horticulturist and the botanist,—the former for gain, the latter for information; the former by his skill and endeavours to produce numberless deviations from a state of nature, the latter to determine, by his examinations and observations, what of the many varied forms can be considered a species, and what not.

Most of our smaller British Ferns succeed very well in pots placed on the window-sill. The larger species, in general, if planted at the foot of a wall (north side) will endure the rigour of our severest winter; yet some few succumb. A plant of *Scolopendrium vulgare* which I had growing unprotected, perished during the intense frost of 1860, when the thermometer on several successive nights sank to zero.

ENFIELD CHASE, AND SOME REMARKS ON ITS RARE PLANTS.

This ancient forest lies on the north of the metropolis, and in the eastern part of the county, stretching from Finchley, or rather from Finchley Common,—a common only in name, like Enfield Chase,—to the borders of Essex or to the river Lea, which separates this ancient tract of woodland from Epping Forest. This last named district is destined, at no distant date, to share the fate of Hainault Forest, on the eastern side of the river Roding —a tract now under the woodman's axe, *i.e.* undergoing the process of disforestment.

The Chase extends several miles northward, and ends in Hertfordshire.

Here several edifices bear testimony to the former grandeur of this regal park, viz. South Lodge, West Lodge, North Lodge, Southgate, Potter's Bar, etc.; and there are still remnants of kingly residences both at Enfield and Cheshunt.

This hunting demesne, once abounding in deer and other beasts of chase, was disforested by Act of Parliament in 1779. It had, like Epping Forest, been long forsaken by royalty, and probably, from its vicinity to London, was becoming a nuisance in the neighbourhood.

What has become of Epping hunt, and when was the last royal stag exhibited to give cockney equestrians an opportunity of displaying their skill in horsemanship, and of wearing their leather unmentionables? What changes have Norwood and its ancient denizens, the gipsies, seen in our days!

Dulwich Wood and the charming braes of Norwood are now in the process of conversion into suburban villas; gipsies are now as rare in Surrey as parks and woods will soon be near the metropolis.

What would the British Solomon, James I., have said if he could have foreseen this change, and the conversion of the noble parks in London's vicinity into villas for its citizens? Let the ghost of Isaac D'Israeli answer this question if it can, and has nothing better to do.

One comfort remains. Enfield Chase, though now enclosed, and of course cultivated, is not densely populated; and it will

probably be some years ere the new colony of Colney Hatch reach far on its way to meet Enfield.

The soil of the Chase is quite as unpromising, unproductive, and uniform as that of the whole county in general, excepting that part where the chalk crops out, as at Harefield. It is a lean, cold, adhesive, gravelly clay; and though in the vicinity of the metropolis, and consequently well manured, yields no superabundant produce either of cereals or of hay.

Its general aspect, for Middlesex, is picturesque; its surface is undulating; it has elevations and slopes, ridges crowned with ancient woods, and deep valleys, abounding in rich pasture and well shaded ponds. The air is excellent, and the population healthy.

A catalogue of its botanical productions cannot be given, for the best of all reasons, viz. they are unknown to the historian of the few plants hereinafter enumerated.

Above twelve months since, one of our fair and obliging correspondents observed a strange Orchid which unexpectedly appeared in the shrubberies about her residence, Chase Cottage, a mile from Enfield, on the road to Southgate; and she, the owner, obligingly sent a note concerning it to the 'Phytologist,' and this notice appeared in our periodical. There was something mysterious about its appearance here, for the plant in question had never been recorded as a Middlesex species, neither is it known in the Epping district of Essex adjoining.

The lawn and appendages of Chase Cottage had been laid out, planted, and kept in trim condition for between thirty and forty years, yet this strange vegetable visitant had never been observed till within the last year or so. It is now extending over the plantations, and is encroaching upon the flower-beds. Recently a few plants of it have been detected in a meadow on the opposite side of the road.

As above said, the appearance of this plant is mysterious—one of the inexplicable marvels of the vegetable kingdom. How was it brought to its present locality? With the trees planted there? But they have been in their present situation nearly forty years; and would it have remained dormant, and retained its vitality for so long a period? Probably not.

If this plantation had been made with young trees from the tracts of Surrey and Kent, where this Orchid abounds, such an

hypothesis would not be altogether inadmissible. But this is not the case. The shrubbery, which possesses nothing unusual about it, was probably planted by Messrs. Loddiges, of Hackney; or the young plants were supplied from some of the numerous nurseries near London.

Another interesting problem about this *Epipactis*—for such it is, either *E. purpurata* or *E. latifolia* or *E. media*—remaining to be solved, is its parasitical habit. Mr. Wollaston asserts (see 'Phytologist,' N.S. vol. vi., Feb. 1862, p. 63), that it grows only on the roots of Beech and Hazel. At Chase Cottage, Enfield, it certainly is not confined to these roots, and here it does not appear to be parasitical, or, if it be, it has a general attachment to all sylvan beauties; it does not confine its favours to two trees. Parasites usually fix on individuals of one species, unlike the parasitic species of the human race, who prey on all mankind indifferently; hence it may be inferred that this is no parasite. The next question to be answered will be, is this *Epipactis E. latifolia* or *E. purpurata? E. latifolia* has a stouter, taller, straighter stem, and more numerous, broader, shorter, and thicker leaves than the Chase Cottage plant has. The inflorescence is also much laxer in the present than it is in the other species. *E. latifolia* is not an uncommon species, *E. purpurata* is.

Whatever it be, whether one or other of the two forms or species named above, or *one* distinct from both, it is part of the vegetation of the ancient forest. That it should have remained dormant for so long a period and again re-appeared, is one of the wonders of vegetation, but it is not quite singular. (See 'Phytologist,' N.S. vol. ii., May, 1857, p. 114, for an analogous case.)

Mr. Masters's remarks, or rather Mr. Oxendon's, are to the following purport:—A field that had once been pasture, and subsequently in tillage for a space of forty years, when again "it was laid down for grass, and the third year after it was thus laid down, there appeared in it at least a hundred Bee Orchises; more, in fact, than existed in a circuit of five miles round."

Respecting the present subject, the Enfield *Epipactis*,—as it may be called till we get an approved name for it, guaranteed by a respectable sponsor,—the most probable hypothesis is that it is as original as the oldest plants of the forest; and that, like the Bee Orchis near Broome Park, Kent, it re-appeared after being in abeyance for nearly forty years.

There are several very interesting plants in this part of the Chase, viz. between Chase Cottage and South Lodge—a mansion and park once occupied by the celebrated Earl of Chatham, the father of the equally celebrated Mr. Pitt. This eminent statesman resided here before the Chase was disforested.

These two residences are about a mile or a mile and a half apart, and are situated on a ridge which extends all the way to Southgate. To the south or south-east there is a considerable depression or valley, where there are large ponds—fish-ponds anciently, but now nearly filled up with mud and vegetation. On these both the white and yellow Water Lilies grow abundantly; and on the bank of the middle pond, shaded by Alders and other moisture-loving trees, there was gathered by one of our fair companions a fine specimen of *Inula Helenium*. There were several roots of this fine plant here.

That this famous plant is a genuine native of this place, deponent will not venture to affirm; but he can say with assurance that, to his knowledge, it does not grow in any station between our four seas where it has so fair claims to be recognized as a wild plant. It is far from any garden, and it is far from the site of the gardens of the noble occupant of South Lodge. This place is so solitary as to be haunted by herons, very shy birds.

The vegetation there is just what is common to such places, viz. Figworts, Loosestrife, Forget-me-Not, Water Veronicas, Bur-reeds, Pondweeds, the usual tall Water Grasses, etc.

The only other plant which by courtesy might be called rare, is the pretty blue Periwinkle, *Vinca minor*. This carpeted almost every wood or coppice near Enfield, and it was equally plentiful about Southgate.

Another rare plant observed during this walk, but on a more elevated part of the Chase, viz. on the ridge not far from the road, was *Sambucus Ebulus*, a species which it has become fashionable in some quarters to stigmatize as a suspected ALIEN. In the 'Cybele' it is called a *denizen*, which is indeed the highest honour that by the laws of botanical distribution can be conferred on a stranger or wayfarer. The term implies inferiority to the ancient *noblesse*.

Vinca minor, on the same indisputable authority, is ranked with *Sambucus Ebulus*, viz. it is a denizen. The last and scarcest of the three, *Inula Helenium*, Elecampane, is privileged to enjoy

the high honour of full and undisputed citizenship. It is as much a native as the *Daisy*, although not so common!!

This will appear most capricious and inconsistent to all who are well acquainted with the distribution of our British plants, and especially to those who know the botany of the metropolitan counties.

Elecampane is probably wild in the Isle of Wight, and it may be quite right to call it a native; but, on the other hand, it is quite wrong to say that the other two are not equally so. For one plant or one locality seen for *Inula Helenium*, at least twenty have been seen for *Sambucus Ebulus*, and thousands for *Vinca minor*. No plant is more common in Enfield Chase than the latter. It is nearly as common about Totteridge and Epping Forest. Every wood and copse near Enfield and Southgate are, so to say, carpeted thickly with this pretty plant. The creeping Bugle plant, *Ajuga reptans*, is not so common, nor the Wood Crowfoot, *Ranunculus auricomus*, nor the Primrose. It is plentiful in Surrey, about East and West Clandon, and in other parts of that county. It also abounds in Essex, and about Theydon Bois; and in many other parts of this district it is seen with variegated leaves and particoloured flowers.

I have never seen *Sambucus Ebulus* in what might be called justly a suspicious locality but once, viz. at a farm near Llanderfel (Capel Bethel). I never saw *Inula Helenium* in an unsuspected or unsuspicious locality, except in the one above recorded—it is believed for the first time—near Chase Cottage, or near South Lodge, Enfield.

Another plant, which nobody has ever suspected of being anything but native, was seen in the hedge near Chase Cottage, viz. *Tanacetum vulgare*; and here the plant appeared to be, and probably was, an escape. Like the Elecampane, it was formerly cultivated or kept in gardens, and was of some repute in cookery, as its more respectable associate was eminent for its curative and cosmetic qualities, applicable alike to diseases of the body, infirmities of the intellect, and griefs of the heart. Yet this notoriously cultivated plant is called in 'Cybele' a *native*, and the Periwinkle and Danewort *denizens*. "Credat Judæus!"

It is barely even-handed justice to brand some plants as suspected or notorious aliens only because they may happen at some time or other to have been favourites, and therefore taken

under the special protection of man as a reward for their real or imagined virtues. Nobody, however, has branded the Tansy, the humble seasoning of the homely puddings of our ancestors, with the stigma of alienism. Why should anybody suspect the Periwinkle, which has been cultivated for the beauty of its flowers and foliage, to be originally an alien, though it be in many places a thousand times more common than the Tansy is? We saw but one or two plants of Tansy in a hedge near a cottage. We trod over miles of Periwinkle in the coppices about Enfield, and in the woods about Southgate.

About Guildford we only found Tansy near the river. We found Periwinkle everywhere in the woods from Guildford to Leatherhead. There can be no cavil against entering *Inula Helenium* as a true native, but there is a great want of judgment and consistency in excluding *Vinca minor* and Danewort from the same class.

At Southgate, *Senebiera pinnatifida*, or *Coronopus didymus*, is as well established as it is about Parson's Green, Kew Green, and Chelsea. It appears also well established in the lane between Southgate and Colney Hatch. That it has spread from Southgate to this other station in the lane there is no doubt, but it is plentiful in both localities. If this plant once get a good footing, it is not easily eradicated.

This is a very brief list of plants, but it is as long as we can conscientiously make it. There are rumours of other rare plants in this neighbourhood, possibly the remains of cultivation, possibly outcasts; *n'importe, i. e.* it is of no very great importance how they got possession of the soil. "Possession is nine points of the law," or nine-tenths of the battle. What are these plants? Are they likely to grow there provided the locality remains undisturbed? What are they good for? Are they ornamental or useful plants? Their history, relationships, characters, etc., are sufficiently interesting to deserve to be looked for and looked at.

A report has been circulated about *Spiranthes autumnalis*, viz. that it has been detected in a part of the forest recently cleared. How many hundreds or thousands of years were these plants in existence, appearing only when the forest was cleared, and going to sleep while they were sheltered and densely covered by the leafy trees? Let geologists and physiologists answer these interesting questions; our functions are rather historical than phi-

losophical. We aspire not to things above our reach, nor meddle with what is too high for us, nor venture beyond our depth. *Non omnia possumus omnes*—'One man should not know everything.'

FLORA OF ESSEX.

Additional Localities for Essex Plants, and some Observations thereon.

Mentha viridis.—More than one variety of this variable Mint grow plentifully in an old chalk quarry not above a mile from Grays, on the west side of the town. The pit is both large and deep, and the sides are densely covered with a thick growth of shrubs; among these the Spearmint grew luxuriantly in 1857.

Cardamine amara was seen on the wet banks of the Colne, above Colchester, in 1835, and close by the river. *Lamium maculatum* was collected at the same time, in the same locality.

Lathyrus hirsutus.—The late Mr. Salmon used to collect this species in some parts of Essex, especially among the bushes about Hadleigh Castle. Specimens procured by him are in the herbarium of the Linnean Society.

Mr. Salmon also found *Vicia bithynica* in the same locality, or not far from it.

Corydalis lutea grew on a wall at West Ham in 1832.

Erysimum orientale.—In Buddle's Herbarium there is a specimen of this anciently introduced Crucifer. The note, an ancient one, states that it was from Essex.

Lepidium Draba, which is plentiful about Barking, as it is in many parts of the valley of the Thames, is stated in the 'Flora of Essex' to be "an escape," or "supposed to be an escape from cultivation." Where was it supposed to have been cultivated, and for what purpose? Are there any traditionary accounts of botanical gardens about Rochford and Fambridge?

Frankenia lævis.—Is there any living authority for the present existence of this plant in Essex? It has disappeared on the coasts of Suffolk and Norfolk (?).

Saponaria officinalis abounded in 1835 in a banky, grassy waste between some cultivated lands, or ridges, or fields, between

that part of the London road and Lexden, but nearer to Colchester than to the latter place.

The situation of this place was on the west side of the road, several hundred yards from the highway, and about as far from any house or garden. It was not far from the Quakers' Free School, which then was on the right side of the Colchester and Lexden road.

Hypericum Androsæmum.—In 1827 and 1828, this fine species grew on the very verge or outside of Hainault Forest, now in process of demolition.

The road from Abridge to Romford passes through the forest, having Lambourn on the left, and Chigwell Row on the right. On this road there used to be a gate, to hinder the cattle, etc., from straying beyond the limits. On the left of this gate, up the hill or declivity for a long way, this *Hypericum* grew on the stiff clay bank above the ditch, and protected by the hedge. I never observed it so plentiful nor so large in any other situation. It is extremely common between Lingfield and Edenbridge, on the confines of the two counties Kent and Surrey; but here the plants grow straggling. In Hainault Forest they grow as close to each other as the plants of a thorn hedge.

Erodium moschatum.—For what do the cottagers of Dedham cultivate this plant—for ornament or use?

Melilotus arvensis and *M. officinalis.*—The latter of these two species is the rarer one in the south of England. The former, viz. *M. arvensis,* long before it bore this name, was universally known as *M. officinalis* or as *Trifolium officinale.* Hundreds of specimens in existing herbaria will establish this point. *M. officinalis* was known in England a century before *M. arvensis* was so much as heard of amongst us. Why modern phytographers have assigned to the rare species the name so long borne by the common one, possibly the admirers of Cosson and Germain may be able to tell.

Trifolium elegans, Savi.—"Clews" have been obtained leading to the origin of the above plant in fields about Perth and Nottingham (see 'Phytologist,' *sub voce T. hybridum*); and probably similar threads or packthreads might have been discovered to enlighten the Essex —— (we will not write the word) on the subject of the history of this fine species in this county.

Mr. Hudson made no wonderment of its occurrence about

London a century ago, and there is no reason why his successors should be in the dark about its appearance in its old haunts.

Myrrhis odorata.—I am not so sceptical about this plant as the author of the 'Flora of Essex,' and believe that Blackstone or his annotator found the plant then and there.

This fine species has long been cultivated in cottage gardens; and the name attached to it, viz. "Sweet Fern," is some corroborative evidence that the entry in Blackstone is correct.

Artemisia Absinthium.—A broad-leaved variety of this plant is plentiful in the marshes near Purfleet; and there is not far from it a large-flowered variety of *Salvia verbenaca*—a form that about Cobham Park, on the other side of the river, might pass for *S. pratensis.*

Antennaria margaritacea.—Does this plant still grow in moist meadows in Essex, and particularly in a meadow near Bocking?

Inula Helenium.—It would be desirable to hear how many of the Essex stations for this fine plant still produce it. In the 'Cybele' it is called a native. The author of the 'Flora of Essex' ignores its claims as a native of his county. Is it a genuine, unsuspected native of any of the neighbouring counties?

Crepis biennis.—Mr. E. Forster, in 'Phytologist,' vol. ii. p. 610, states most decidedly that this *Crepis* did not then, 1846, grow at Purfleet; but that *C. taraxacifolia* had been mistaken for the rarer species. How is it that *C. biennis* is entered, on Mr. E. Forster's authority, as a plant of the marshes of Purfleet? He says, "Having searched many times since (1805?) and found no trace of this species, I am well convinced that there is only *Barkhausia taraxacifolia* to be found there."

According to the 'Essex Flora,' this *C. biennis* is the commoner species, being found in seven districts.

According to Mr. E. Forster, *C. taraxacifolia*, recorded as the growth of only two districts is the most widely distributed.

The doctors differ. Who can decide?

Senecio viscosus is registered in the 'Flora of Essex' as an Epping plant. It might possibly grow near Woodford. It is found on the other side of the river, viz. in Kent.

Vinca minor, a doubtful native in 'Cybele,' passes muster in the 'Flora of Essex' as a genuine species. I have seen it at Theydon Bois with variegated flowers, part white and part pink. Varieties with variegated leaves are not uncommon.

Villarsia nymphæoides was planted in its present Essex locality (?) by Mr. Warner. (See Mr. E. Forster's interleaved copy of Pl. Woodfordienses.) *Query*—in what other sluggish rivers of Essex does this ornamental plant grow?

Anacharis Alsinastrum.—The note on p. 300 is obscure: "Supposed to be introduced from America," etc. What has the identity or non-identity of our plant with the supposed American original to do with its generic name? If the species came from America, it is but just that the son or daughter should bear the family name of the sire. If any members of the family live in America, the presumed British connection may legitimately bear the same name? What have the rules of botanical nomenclature to do with the question? What is the name of the new British-born vegetable babe?

If it cannot by its qualifications prove its relationship to some already known progenitor or relative, its sponsor has a right to name it after himself, or after some of his friends, or after some of its own prominent qualities, or from the place of its presumed inroad, or from some fancied resemblance it may bear to something else, either manifested in the animal, vegetable, or mineral kingdom.

What is the meaning of the dependence of *this* plant specially on the rules of nomenclature? All inventions and formations depend on some rule. Poets and painters, and it is presumed botanists also, have established artistic or æsthetic rules whereby they are guided in naming their novelties and discoveries. What is there in this American water-weed to hinder its quietly appearing under one of the several names it already bears? Is the English name *Water Thyme* dependent on the rules of botanical nomenclature, or on the nature, structure, and length of the stem, or on the smell of the plant, or on its habit and habitat? If this name "Water Thyme" depend on the laws of botanical nomenclature, some will venture to question their justice and authority. Water Chickweed would be a more descriptive vernacular title, for we have numerous examples and authorities to rely upon. Where have we an example of Water Thyme either in books or in nature?

Zannichellia palustris, var. *pedicellata*.—The variety is more common than the type in Norfolk and Suffolk.

Schœnus nigricans.—Whereabout in the fens at Tilbury Fort does this Rush grow?

The above is a charitable attempt to supply some of "the deficiencies" of which the author says that he "is well aware." Something more on the same subject is in hand, and will be offered another time. *Ne quid nimis.*

EAST AND WEST INDIAN FIBRES.

A pamphlet was lately sent by a friend on the subject of vegetable fibres; it is a privately circulated tract, named, 'Vegetable Silk and Wool is now being produced from East and West Indian Fibres, namely, Rheea, Plantain, Aloe, Pine-apple, Neilgherry Nettle, Pita Yercum, and similar plants, by J. Hill Dickson's patents, at the East and West Indian Fibre, Flax, and Hemp Works, Lower Tooting, London.'

It appears that, from a small capital of less than £4000 (£3490) and a weekly payment of £29 for working the machinery, a net weekly profit of nearly £600 may be realized (£595), see page 9. Our moneyed classes, who are looking ahead for safe investments in Turkey, Russia, and Egyptian bonds or stocks, who patronize underground railways and other undertakings which barely pay one or two pounds per cent.,—it is fondly anticipated, will be obliged to us for this information. The sceptical will say it is too good to be true. A revenue of above £30,000 per annum yielded by an investment of less than £4000, does at the first glimpse appear incredible.

The botanical name of Rheea-fibre, which heads the list, we have ascertained to be *Bœhmeria nivea*, or *Urtica nivea*, or *U. tenacissima*; for these are synonyms, distinct names for the same plant. It is not in Major Drury's 'Useful Plants of India,' and probably it is not an Indian plant. It is delineated among Jacquin's 'Figures of Rare Plants,' and also in Rumpf's 'Plants of Amboyna,' Herb. Amboinense.

This new material for spinning and textile purposes, which the patentee professes to have introduced, and, what is still more important, has invented machinery for separating the fibre from the stalk without *retting* (steeping),—is also named China-grass (because it grows in China?)—appears to be of national importance.

Even *Jute*, the fibre of a species of *Corchorus*, would be much more valuable if it could be separated from the bark without its

undergoing the retting process (steeping), whereby much of the finer fibres are rotted and the tenacity and strength of the staple much diminished.

Much valuable matter on this subject may be seen in the late Dr. Forbes Royle's excellent work on the fibrous plants of India.

Mr. Dickson's pet material, Rheea-fibre, appears, from his statement, which has the external evidences of veracity stamped on it, to be superior to jute and to all other fibres hitherto employed in manufactorial establishments. The profits estimated on the use of his machinery and patent liquid are excessive and incredible, but that he has either discovered or introduced a valuable textile material, there is no reasonable doubt. We know that the fibre of many plants of the Nettle family can be, and is, manufactured into cloth, ropes, etc.; and not long ago, in this magazine, the heaps of hopbine were suggested as a fit subject for the experiment. These immense stacks are both unsightly and dangerous. The conversion of their fibre into ropes, sails, paper, etc., would be praiseworthy—probably profitable.

Review.

Notes sur quelques Plantes rares ou critiques de la Belgique. Par François Crepin, de Rochfort. Deuxième Fascicle. Bruxelles: Libraire de Gustave Myolez, etc. 1862.

The admirable author of this *brochure* on Belgian botany is deservedly esteemed as one of the most observant, careful, conscientious, impartial, and energetic students of the science. The prefaces to his several works which have been submitted to the notice of our readers, are remarkable for the excellence of their matter, and for the temperate, generous, and manly style in which they are delivered. The following remarks on *species* are quoted as a sample, and as a proof that the high encomiums bestowed on M. Crepin's labours are not exaggerated. Species, our author admits, is a provoking subject, "un sujet irritant;" it has often been a bad or unproductive subject; it has angered, fretted, and burnt the fingers of some who have meddled with it, and whose knowledge and philosophy and temper were "incompetent to the matter."

The brief reflections here submitted are offered only to beginners and amateurs, "who study botany with zeal, but only as a relaxation from labour; who have only the intervals snatched, as it were, from duty and business, to devote to this pursuit. Descriptive botany is like a mark that everybody may throw his bolt at, and in this respect it has the advantage of other sciences; but, on the other side, it lies under the disadvantage of being sometimes attempted by juveniles, or inadequately enlightened authors, who judge and criticize, without judgment and discretion, the works of men who have made this science the sole object of their studies, and who have spent their lives in observing and investigating the works of nature.

"At all times prudence and moderation are commendable, especially in beginners and amateurs; but they are *necessary*, at the present period in the history of the science, when there are two sects or schools of phytographers entertaining opposite views on vital points; both well sustained by men whose merit and knowledge are incontestable. Young writers and tyros should be extremely circumspect, and beware of reckless, sweeping assertions. They ought to apprehend this truth, viz. that in the works of descriptive botany the species are *badly described* (*grossièrement décrites*), not because the authors had not in general a perfect acquaintance with them, but because it is so difficult exactly to select and express the characters called specific, or to seize those aspects under which natural objects present themselves to our observation.

"When an author, after deep study, has succeeded in comprehending a *new* or a dubious species, it is very often impossible by a simple description to convey to others his apprehensions and conceptions."

The author proceeds with his reflections, and concludes that in some species, quite distinct, the characters are unhappily not very decisive in the *diagnoses* (distinctive marks).

"Beginners," he proceeds, "should not rely implicitly on descriptions, which are necessarily always imperfect. . . . They should examine the objects themselves. By comparing individuals of the same species, and species of the same genus, they will discover that the species are better distinguished by nature than by books, and they will end in perceiving that the descriptions which they thought faulty are better than they appeared

on a first trial, when they barely knew what the author intended to describe."

M. Crepin adds, "Occasionally adversaries of the new school, or the progressionists—or *progresistos*, as a Spaniard might term them—both write to me and tell me *vivâ voce* that they have sent obscure and critical species to several phytographers, celebrated for the specific creations they have inaugurated, and that these have returned the specimens undetermined. My correspondents infer that these *savants* did not recognize their own offspring, and consequently that their learned labour was entirely lost. These conclusions are quite contemptible; the examples sent are always dried, and sometimes (often?) imperfect, and a prudent man would not commit his reputation to such inquirers. Besides, in some genera there are disputed forms and imperfectly known species, which cannot be positively determined without the aid of numerous living specimens."

M. Crepin, with much good feeling, alludes to the loss botanical science generally, and Belgian botany especially, suffered by the assassination and death of Count Limminghe, who consecrated both his fortune and his personal exertions to aid the progress of botany.

The important additions to the Belgian flora, for which all botanists are indebted to our author, are the following:—*Sagina depressa, Cerastium tetrandrum, Glaucium flavum, Arabis muralis, Thlaspi neglectum, Viola mirabilis, Trifolium maritimum, T. filiforme (T. micranthum), Sedum aureum, Rosa coronata, R. ardennensis, Epilobium lanceolatum, E. Lamyi, Cynoglossum montanum, Senecio jacquinianus, Artemisia camphorata, Crepis nicæensis, Hieracium mosanum, Potamogeton plantagineus, Zostera nana, Carex divisa, Bromus patulus.*

Sagina depressa is not a very recent creation. It was distinguished about forty years ago by K. F. Schultz, author of 'Prodromus Floræ Stargardiensis.' As it is just possible that *all* our readers may not be deeply read in the political geography of Germany, for the benefit of the very few be it understood that Stargard is on the right bank of the river Oder, about seventy or eighty miles north of Berlin. (*Note.*—This is not the same *savant* to whom the readers of the 'Phytologist' are indebted for the Flora of Pfalz, and for the emendations and corrections which have been submitted to their notice.) *Sagina depressa* is the

scientific offspring of an older branch of this eminent family. This species or variety is said to be distinguished from *S. procumbens* and *S. apetala* by the close application of the sepals on the capsular valves, after the dissemination of the seed, *i.e.* not spreading out horizontally in a cross-form position, as in the other two previously named species; it is worth looking for. Most of the Belgian plants are also British plants; and there is consequently a greater probability of its presence than of the certainty of its absence in these our islands.

Oxalis stricta is one of the rejected species of England, and one of the indigenous plants of Belgium. On the other hand, *O. corniculata* is rejected in Belgium as an introduced subspontaneous straggler, while in our country it generally passes muster as an unchallenged native.

The Belgian native has in our experience a wider range in England than the genuine English one; but we have never seen it in an unsuspicious locality. This may be the case with many of our unsuspected natives, viz. all that are confined to cultivated places, wastes, rubbish heaps, and similar localities.

On pages 42, 43, and 44, there is an important note on *Epilobium lanceolatum*, a species recently detected at Plymouth by our indefatigable and observant correspondent, Mr. Briggs. We have carefully compared the ample supply of living plants kindly sent from Devon, with M. Crepin's description, and they accord generally pretty well. Some of the Plymouth specimens are rather bushy, but the characters derived from the stem, the leaves, and the flowers are constant in all the specimens examined, and are amply sufficient to distinguish this species from *E. montanum*.

Several years ago (fourteen or fifteen) a form of *E. montanum*, supposed to be *E. lanceolatum*, was sent through the Botanical Society of London to the Natural History Society of Guildford. This form had, indeed, long and lanceolate leaves, and was at least a yard high. It was found at Stapleton, near Bristol, and probably grows there still. Will some Bristol reader be so obliging as to look for this form of *E. montanum*, and send an example of it to the office of the 'Phytologist,' or to A. I., 28, Upper Manor Street, Chelsea, S.W., near London.

Here, with reluctance, we are compelled to stop. Our space will not admit of any more extracts from this publication, which

is one of the most valuable contributions to descriptive botanical literature which it has been our good fortune to notice.

These notes evince that the greatest care has been taken to secure accuracy and perspicuity; and where the author conscientiously differs, as he occasionally does, from eminent living authorities, his views are advanced with singular moderation, and with becoming deference to the opinions of those who have gone over the same course. There is not the slightest trace of egotistic conceit, nor flippancy, nor depreciation of other men's labours, nor an exaggerated over-estimate of his own, in this slim tractate. With a complete mastery of his subject, he excels in the *curiosa felicitas* of style, neither affectedly learned nor deplorably mean; neither too copious nor too concise. The *brochure* is confidently recommended to all our readers; and if they will take our advice, and read it carefully, and ponder its contents, they will both thank the giver of this counsel and probably be better, if not wiser, after the perusal.

Our readers will again, at another time, be edified by more extracts from these judicious notes.

BOTANICAL NOTES, NOTICES, AND QUERIES.

Answers to Correspondents, and Remarks on Communications received since the 27th of August.

Information has just arrived from an unknown correspondent, that an "Expedition to Vancouver's Island and British Columbia" has been organized in the northern capital. The object of this Oregon association is the collection "of seeds of hardy trees and plants, and the seeds and roots of flowers."

Mr. Robert Brown, a naturalist well known in Edinburgh, has been appointed to proceed to Columbia in the capacity of collector, to carry out the intentions of the association.

Such of our readers as desire to aid in realizing the objects of this society should apply to James M'Nab, Esq., Superintendent of the Royal Botanic Garden, Edinburgh, *Treasurer* to the Society.

Mr. Briggs, of 10, Torrington Place, Plymouth, informed us, August 27th, that the *Epilobium* announced in the August number, p. 286, is not rare about Crabtree, a village two or three miles from Plymouth, adjoining the *Laira*, a large inlet from the sea into which the river Plym flows.

"The plant abounds on a wall in the village, by the side of the Plymouth and Exeter road, intermixed with plants of *Epilobium montanum*,

which is, even when only a few inches high, always distinguished from the former by its broader and not so decidedly stalked leaves."

Mr. Briggs has sent us an abundant supply of living specimens, and it is evident from a comparison of them with *E. montanum* that it is quite distinct from this well-known species.

It appears to agree very well with some published descriptions of *E. lanceolatum* in every character except the size. The plants from Plymouth are all dwarfish compared with examples from the Channel Islands.

A fair correspondent, "H. B.," sent on the 24th of July a specimen of *Spiræa Filipendula*, collected near Henley-on-Thames. Is this a new or unrecorded locality for the said plant?

From "H. H. C.," High Street, Tunbridge Wells, a lively, graphic, and detailed description of a botanical tour of three days between Ostend and Nieuport has been received. Our earliest consideration will be bestowed on this excellent narrative.

Our old friend Mr. Charles Howie, of St. Andrew's, has very obligingly communicated reflections on a botanical stroll along the coast of Fife, from St. Andrew's to Crail, the *eastmost* nook of Fife:

"Now frae east nook o' Fife the dawn
Speeled westlines up the left,
Carles, wha heard the cock had crawn,
Begoud to rax and rift;
An' greedy wives, wi' girning thrawn,
Cry'd lasses up to thrift;" etc.

We have to thank our correspondent in Scotia's ecclesiastical metropolis for another contribution to the botany of the "Kingdom of Fife," for which it is hoped that room will be found in the next month's number.

Our excellent friend "C. J. A.," of Preston, has been botanizing in Norfolk, and appears to have made a successful *raid* on the rarities of Lopham Fen, Burgate, etc. A narrative of his explorations in this rich county will be a treat to our readers.

"W. P.," of 45, Frith Street, Soho Square, has sent materials for a rider to the article on the Oak-leaved Honeysuckle, which has been in hand several weeks.

Our esteemed correspondent "J. S. M." in his homeward journey saw much of *Verbascum thapsiforme* between Vienna and Switzerland, in "the Austrian Highlands, where, like many other plants, it grows much more luxuriantly than in the North." Some good examples of this species have been seen in the Chelsea Botanic Garden.

To "J. B.," of 18, Shawfield Street, Chelsea, the thanks of the editor of the 'London Flora' are hereby tendered for a list of rare plants seen about Chelsea, Mortlake, Wandsworth Common, etc.

We hope our kind patient friend "J. S.," of Perth, will bear with us a little, and the long score against the editor of the 'Phytologist' may be blotted out, or part of the liabilities discharged. For the present be it understood that the new locality for *Aremonia agrimonioides* is not forgotten.

The botany of the southern shores of the Moray Frith, about Portsoy, Banff, and up the strath to Dufftown, will be a treat to those who know the 'Northern Flora' of our early and lamented friend Dr. Murray, whose premature death was a heavy blow to the lovers of Scottish botany.

Also, though the plants of Ben Lawers are now about as well known as the botany of Llandudno or Great Orme's Head, the observations of a fresh investigator will either add to our previous knowledge or exhibit the known facts under a new aspect.

The Rev. F. T. R.'s "Gleanings on Braunton Burrows" are in hand, and will be printed as soon as room can be found. Our practice is "First come, first served," or first in hand, first printed. If any contributor avers that this rule is but partially carried out, the impeachment will not be denied. Lately our materials have accumulated far beyond our means of using them; consequently selection was necessary, and hence the delay in completing the "Comparative List," which has now been long in hand. We hope to find room for it before Christmastide.

Let not our Norfolk and Oxfordshire correspondents fancy that they need not redeem their promises after what has been said about a plethora of news; room will be made for their contributions.

Our Yarmouth correspondent obligingly informs us that he has never seen *Œnanthe peucedanifolia* near Ormsby, although in the new 'Botanist's Guide' there is a notice to the effect that it has been found near Runcton, Holme, and Busham; but the author queries the statement. In the same communication it is stated that *Stellaria nemorum* has never been (to the writer's knowledge) found in this part of Norfolk, *i.e.* the south-east, east of Norwich and south of Cromer. Item, that *Glaux maritima* has been mistaken for *Frankenia lævis*. Probably *Lepidium ruderale* has been a slip, and our excellent correspondent W. Winter may have meant *L. ruderale* and written instead *L. latifolium*. There is a suspicion lurking in some minds that *Lepidium Draba* has been made the substitute for *L. latifolium* in the 'Flora of Essex.' *Lepidium Draba* abounds in the valley of the Thames; *L. latifolium* has long disappeared in this district.

Our obliging correspondent "H. G. G." is informed that there is a notice of the rare white variety of *Lamium purpureum*, observed by Mr. Sim near Perth, and recorded in the 'Phytologist.'

The variety *alba* of *Prunella vulgaris* is common in some parts. We have seen it abundant at New Brighton, and it is not very rare on heaths near London.

Mr. Sim's notice of *Campanula Trachelium*, var. *alba* or *album*, shows that this variety, like the common form, is widely distributed. It has been observed in Surrey. Probably it is as frequent or as scarce as the white variety of the commonest *Campanula*, or Harebell.

We do not know if *Centaurea solstitialis* is known as a Kentish plant; a record of its appearance there is unknown to us. "S. B.," of Sydenham, sent the plant from a Clover-field at Bickley, near Bromley, in Kent, only a few days ago.

Before concluding these notes on the general subjects gleaned from letters received since the copy of the September number was sent to press, it may be added that our observant Henley correspondent has detected *Tulipa sylvestris* and *Campanula patula* both in his neighbourhood. Are these plants new to the flora of Oxford? A more detailed notice of his discoveries will appear in another part of this Journal.

Finally, the Editor hereby gives notice that some doubts have arisen in certain quarters about the nomenclature and history of the two yellow Melilots, *Melilotus officinalis* and *M. arvensis*.

There is no doubt about the specific distinctness of the two plants, for they differ in altitude of stem, denticulation of leaflets, length of flowering cluster, colour of flowers, and above all in the form of the legume and in the number of the seeds.

The species now called *M. arvensis* is a taller plant than *M. officinalis*, not quite so bushy, or having the branches less divergent; also the denticulations, or teeth, are longer and broader in *M. arvensis* than in *M. officinalis*. The spike, or cluster, is very much longer and laxer in the former than in the latter, and the legume is not hairy, but blunt, and many-seeded (?) in *M. arvensis*: this organ is elliptical, tapering, and two-seeded in *M. officinalis*.

Melilotus germanica of Lobel (see 'Observationes,' p. 501) appears to be what is now called *M. arvensis*; and *M. italica* of the same author, figured in the same page, is more like the figure in 'English Botany' than the other on the right-hand side of the page. Gerard and Parkinson's figures are probably from the same original as Lobel's.

Professor Martyn's figure in 'Flora Rustica' has more resemblance to *M. arvensis* of modern botany than to *M. officinalis*.

In Gerard's time, the latter was so plentiful in Essex that it was become a serious nuisance. "There cannot be a worse weed," wrote Professor Martyn, 1792, "among bread-corn, for a few of the seeds ground with it spoil the flour by communicating their peculiarly strong taste" (vol. ii. p. 72).

The figure of *M. officinalis*, 1340, in 'English Botany,' although good enough so far as it goes, is not quite satisfactory, being from an immature example; and consequently the legume and seeds are not represented. The figure in the Supplement is better, having the fruit represented; notwithstanding this, we are not quite satisfied that what is called *M. arvensis* is the plant which has been recently discovered; but, on the contrary, our impression is that in the south of England *M. arvensis* has been generally collected, and believed to be *M. officinalis*; and this is the belief of other collectors who have been sounded on this subject.

It is surmised that nearly all the examples of the yellow Melilot now existing in the various herbaria of British plants collected during the present and preceding centuries, are what is now called *M. arvensis*. To clear up this question, it is particularly requested that botanists will transmit loose, spare specimens of their yellow Melilots either to A. I., 28, Upper Manor Street, Chelsea, or to 45, Frith Street, Soho, London. It would be desirable to have the localities, and the time of their collection, on a ticket accompanying each specimen.

We are pretty certain that *M. officinalis* appeared only recently, within ten or twelve years, in Surrey or near London. *M. arvensis*, on the other hand, has been familiar to all the older botanists for many years.

Also all the figures in the old herbals agree better with *M. arvensis* than with *M. officinalis*; and in some modern works, for example in 'John's Flowers of the Field,' the figure agrees better with *M. arvensis* than with its relative.

Our worthy friend and correspondent W. Ashley, of Sheffield, is requested, when quite convenient, to send us the stations for *Erodium maritimum* and *E. moschatum* in Wales, and those for *Achillea decolorans*, *Geranium pyrenaicum*, and *Campanula rapunculoides* in Yorkshire.

Geranium sylvaticum.

Geranium sylvaticum has this day been brought in to me from what I believe to be an entirely unrecorded station, viz. near Llanwddyn, about fourteen miles from this village; it is a very out-of-the-way place just within Montgomeryshire, and in a secluded recess on the south-eastern slope of the Berwyn ridge. I do not at all know the species as a Merionethshire plant, and, so far as I can find, we had no nearer locality for it than Shropshire; and the few habitats given in Leighton's 'Flora' are all from a part of that county furthest removed from the Welsh border. It may be looked upon as a good find, and a very interesting addition to our North Wales flora. I am indebted to our kind friend John Jones, parish clerk of Llandderfel, for this Geranium.

July 12*th*, 1862. William Pamplin.

Oak-leaved or Sinuated-leaved variety of the Common Honeysuckle.

I send you a curious instance of variation from the ordinary form of leaf in a wild Honeysuckle growing here. The plant is growing at the root of an Oak, and in the last four or five seasons has had all the leaves of the usual texture of the Honeysuckle leaf, but a large proportion of them, sometime a whole branch, with the sinuated margin of those of the Oak. Some of the numerous readers of the 'Phytologist' may perhaps be able to adduce a similar instance of two distinct plants growing close by, and one partaking in some way or other of the nature of the other, and explain how in the present case the variation is to be accounted for. The plant this summer has lost its leaves, but should it recover another season, is it probable that the plant is sufficiently impregnated with quercine juice to raise a permanent Oak-leaved plant from an Oak-leaved cutting?

Southgate, August 13*th*. F. Walker.

A Rider to the above.

Periclymenum foliis quercinis, Merrett's 'Pinax,' p. 92.—"Non procul Oxonio," Mr. Jenner. Found first near Oxford, by Mr. Jenner (see Mer. Pin. as above), and afterwards by Mr. Knowlton on the way from Hitchin to Wembly. (Raii Synops. Dill. Ed. 458, 459.)

Periclymenum fol. quercinis, Mer. p. 92.—"Caprifolii non perfoliatum, foliis sinuosis" (Inst. Rei Herb. Tourn. 108). Honeysuckle with sinuated leaves. In white heathwood near Harefield, plentifully. (Blackstone, 'Plantæ circa Harefield,' p. 75.)

Baxter (honest and modest man) tells us he *himself* has found it in (1) Berks., (2) Oxon., (3) Warwick; it is also recorded by Baxter as from (4) Norfolk. (Baxter, Brit. Bot. vol. iv. p. 287.)

Aiton gives this variety (*P. quercifolium*, δ) a prominent place, referring to Merrett. (Hort. Kewensis, vol. i. p. 378.)

Loudon also gives this variety a paragraph, and even notices another, or a *sub*variety of it. (Encyclop. Trees and Shrubs, p. 528.)

Milne and Gordon enumerate no fewer than six places where this variety grows; the first between Ilford and Barking, in Essex. (*Nota bene*: this has been overlooked by the authors of the 'Flora of Essex.')

Meteorology of Montreal.

Mean temperature for the year 1861, 41·72° Fahr.; lowest, 8th February, 37·1° below zero, or 69° below freezing; and the highest, 99·7 : giving a yearly range or climatic difference of 136·8°.

The warmest day in the year was the 10th of June, viz. 81·1° mean temperature; at 10 P.M. it was 76·7°, at 4 P.M. 95·8°, and at 3 P.M. 96°; at night it fell to 60°.

The coldest day of the year 1861 was the 8th of February, mean temperature 23·5° below zero, and 53·50° below freezing.

Vegetation.—Currants and Gooseberries were in leaf on the 16th of May; wild Strawberries in flower the 24th; Dandelion in flower the 23rd; Currants and Gooseberries in flower the 24th; Lilac in blossom on the 3rd of June; Apple-tree on the 4th; Choke-cherries in blossom on the 6th of June.

Varieties of the common Foxglove.

We have observed here (Llandderfel, Merioneth) some unusual varieties, as regards colour of the flowers, of *Digitalis purpurea;* the pure white is occasionally met with in many places, but in hedgebanks a little off the road leading to Bethel a very curious individual was collected and removed into this garden; I was puzzled for my own part how to designate its colour, and should call it a sort of pale salmon colour, but on appealing to our neighbours the ladies at the rectory, I am told that light fawn colour is the proper description of its hue. Our excellent and observant friend John Jones, clerk, has brought in several distinct varieties. We have also some with lacerated (but not by injury), monstrous, or otherwise irregularly formed corollas. W. P.

July, 1862.

St. Patrick and the Shamrock.

With reference to the note which appeared in the 'Phytologist' for February, I cannot say that St. Patrick did not select the *Oxalis corniculata* to illustrate the Trinity, but it appears to me more probable that he took one of the Trefoils, or Clover, as I have stated in a previous number of the 'Phytologist.' However this may be, would Mr. W. be kind enough to read the following, taken from Dr. W. Bulleyn's 'Book of Simples,' and consider whether the saint might not have gathered the *Viola tricolor*, or Herb Trinity, to signify his doctrine:—"This herbe is called *Herba Trinitatis;* but I read in an old, monkish-written Herball, wherein the author writeth that this herbe did signify the holy Trinity, and therefore was called the herbe of the Trinity; and thus he made his allegorie:—This flower is but one, in which, said he, are three sundry colours, and yet but one sweet savour. So God is three distinct persones, in one undivided Trinity, united together in one eternall glory and divine majesty as well; although the three distinct persons be even so, whose glory is indefinable, yet this glory may not bee comprehended of mortall men nor angels." S. B.

Since writing the above, I have referred to Spenser's 'View of the State of Ireland,' and find the following:—Speaking of the late wars of Munster,

before a most rich and plentiful country, full of corn and cattle, he says "The inhabitants were reduced to such distress, that if they found a plot of Watercresses or Shamrocks, there they flocked, as to a feast, for the time." From this it appears to me that the plant referred to by Fynes Moryson as "having a sharp taste, called Schamrock," is the same as the Shamrock noticed by Spenser, and therefore it is the Watercress, and not the *Oxalis Acetosella*.

Whether the Watercress can be determined to be the true Shamrock of St. Patrick, must be left to heads wiser than mine to decide; all I can say is, it might have been.

The following is in Wyther's 'Abuses Stript and Whipt,' 1613:—

> "And for my cloathing in a mantle goe,
> And feed on Shamroots (Shamrocks?) as the Irish doe."

Winter Garden at Kew.

Great progress has been made in the construction of this edifice. The two 50-feet octagons were completed last year. Next autumn is to see the completion of the grand centre, 212 feet in length by 137 feet in breadth; and votes are now to be taken in the House of Commons, of £3300 for heating apparatus and £1200 for walls for the arrangement of earth beds. When the two wings are also built, the several portions communicating with each other by a long central vista, the total length (including the vestibules) will be 533 feet, and the superficies 48,392 feet, or about an acre and three-quarters. This temperate-house makes the vote for Kew Gardens and grounds again large this year. The estimated expenditure for the financial year now just expiring was £37,398, and for the year about to commence it is £22,283.

Variety of Habenaria bifolia.

I have found here a variety of *Habenaria bifolia* in which all the three anthers are developed; the flowers being of one substance and form, resembling *Goodyera*, and without spurs. G. E. S.

Harrogate, June, 1862.

Malachium aquaticum, *Fries*. (Cerastium aquaticum, *Linn*.)

This plant grows on the bank of the Mersey, near Warrington, along with the closely allied *Stellaria nemorum*, L. The soil and situation appear to be favourable to it, for it is luxuriant. It varies considerably in the number of its styles. Out of 40 specimens examined I found 22 with 6, 12 with 5, 5 with 7, and 1 with 8 styles. Stamens ten, alternate, filaments seated on glandular protuberances. Colour of the anthers greenish-blue. The calyx and upper portion of the stem is closely beset with stalked glands, which secrete a viscid matter and retain small insects, as gnats, aphides, etc. Stem above distinctly two-edged. John Peers.

To the Editor of the 'Phytologist.'

Sir,—I would beg, through your Journal, to inquire the meaning of the following English names of plants:—Fat Hen; Lamb's Quarters, *Atriplex patula*, L.; March Parsley, in Stanmarch, etc.; Mercury's Moist Blood, *Verbena*; Raspberry; Seggrum, *Senecio Jacobæa*, L.; Tentwort, *Asplenium Ruta-muraria*, L.; Hollyhock; Haresbeard, *Verbascum Thapsus*, L.; Hay-

maids, *Glechoma;* Hindheal, *Ambrosia;* Hare-burr, *Arctium Lappa*, L.; Prattling Parnell, London Pride, None so Pretty, Nancy Pretty, referring apparently to the heroine of some popular song or farce, and not very old names, *Saxifraga umbrosa*, L.; Wake-robin; Darnel; Dock; Cowslip; Herb Bennet, as applied to Hemlock and to *Geum;* Herb Christopher, as applied to *Actæa*, *Osmunda*, and *Pulicaria;* Sauce-alone; Chadlock, Chedlock, or Kedlock; Charlock, Carlock—Harlock, in 'King Lear;' Cheet, *Camelina;* Close Sciences, *Hesperis matronalis*, L.; Daffadowndilly; Honeysuckle—the meaning of suckle?—Mazzard, the Bird-cherry; Orach; Paigle; Rampe, *Arum maculatum* L.; Love-lies-Bleeding,—the tale to which it alluded?

48, *York Terrace, N.W.* R. C. A. P.

Claytonia perfoliata.

(See 'Phytologist' for July, 1862, pp. 223, 224.) The precise locality reported as above is a lane, on a bank opposite to a house called "Shrubland," at Gorleston, Suffolk, near Great Yarmouth. I have found it there every spring for the last five or six years. H. G. G.

Queries.

Has *Ranunculus Lingua* been observed recently between Rotherhithe and Deptford?

Does *Galeopsis villosa* still grow plentifully among the corn about Sheffield, Darfield, and Wakefield?

Is *Melampyrum arvense* now found at Horsley Bath, near Beeston Castle, Cheshire?

Can any reader verify Grays, Essex, as a locality for *Lepidium latifolium?*

Who has recently seen *Geranium phæum* at Towel, near Maidstone?

Is *Arnoseris pusilla* still found at Petersham, Surrey, and in Tuddington (Teddington) Field, near Hampton Court?

Epilobium angustifolium.—Is the aforesaid plant still growing on Maize Hill, beyond Greenwich? (See Hudson's Fl. Aug. 1st ed. p. 140.)—Gallus. [Can any correspondent tell "Gallus" if the above topological account is still correct?]

Peucedanum officinale.—Can any Sussex botanist tell the undersigned, if *Peucedanum officinale* has been recently found near Shoreham, in Sussex, and by whom seen?—Menalcas.

Narcissus Pseudo-Narcissus.—Does the above named plant still grow copiously in woods near Erith, Kent, as it did during the last century?—Mœris.

Communications have been received from

T. R. A. Briggs; Sidney Beisly; H. H. Cripps; C. Howie; C. J. Ashfield; W. Pamplin; J. S. M.; T. Moore; J. Britten; John Sim; Rev. T. F. Ravenshaw; Hampden G. Glasspoole; W. G. F. Phillimore; Dr. Macalister; M. A. Walker; Mrs. Merrifield; M. F. Crepin; H. C.; W. P.

RECEIVED FOR REVIEW.

Notes on Books.
The Banffshire Journal, Sept. 2nd and 9th.
The Scotsman, Sept. 13th.
Flora of Preston, Part III.

31 MH63

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AND AN ENUMERATION OF

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With Synonyms, References, etc. etc.

BY

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AUTHOR OF 'THE HANDBOOK OF BRITISH FERNS,'
'THE FERNS OF GREAT BRITAIN AND IRELAND, NATURE PRINTED,' ETC.;
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The Publisher thinks it right to apprise the Purchasers of this Work that with the concluding Part there will be given Titles, Contents, Directions for the Arrangement of the Volumes, etc.; in the meantime the following statement will show exactly what the contents of each of the Nineteen Parts already issued comprise, viz.:—

PART 1—contains Synopsis of Genera, Classification, etc., pages ..... ix.—lvi.
PART 2.—Ditto Ditto Ditto pages ..... lvii.—civ.
PART 3.—Ditto Ditto Ditto pages cv.—cxxviii.; and Alphabetical Index, pages..... 1—24.
PART 4.—Alphabetical Index, pages ..... 25—72.
PART 5.—Classification, Synoptical Table of Genera, etc., pages cxxix.—cxl., and Alphabetical Index, pages..... 73—108.
PART 6.—Table of Genera, pages cxli.—clii., and Alphab. Index, pages...109—144.
PART 7.—Alphabetical Index, pages 145—180, and Plates ..... 1—6.
PARTS 8 & 9.—(Double Part) pages 181—204, and Plates ..... 7—20.
PART 10.— Pages 205—228, and Plates ..... 21—28.
PART 11.—Pages 229—264, and Plates ..... 29—34.
PARTS 12 & 13.—(Double Part) pages 265—288, and Plates ..... 35—44.
PARTS 14 & 15.—(Double Part) pages 289—312, and Plates ..... 45—54.
PART 16.—Pages 313—336, and Plates ..... 55—62.
PARTS 17 & 18.—(Double Part) pages 337—360, and Plates ..... 63—72.
PART 19.—Table of Genera, pages cliii.—clxii.; Alphabetical Index, pages 361—372, and Plates ..... 73—78.

☞ PART 20 is nearly ready, and it is confidently hoped that, as much of the remainder of the Work is in a forward state, there will be but little delay in issuing the future portions.

September, 1862.

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